

Claims

1. (Currently Amended) An adapter for use in a handpiece system that includes a supply conduit and a medical instrument having an electrical operating element thereon, the adapter comprising:

an adapter body having a first edge; and

first and second adapter electrical leads wherein, when the adapter is in place between the supply conduit and the medical instrument with the adapter electrical leads electrically connected to the supply conduit and to the medical instrument, electrical power is received by the adapter from the supply conduit and transmitted through the adapter to the operating element, and

wherein the adapter is selectively switchable without disassembly by a manual operation to move the adapter leads relative to the supply conduit to match a polarity of the electrical power transmitted from the supply conduit to a polarity required by the operating element, and wherein the first adapter electrical lead comprises a first end and the second adapter electrical lead comprises a second end, said first and second ends being axially offset along a longitudinal axis of the adapter body such that the first end is located a first distance from the first edge of the adapter body and the second end is located a second distance from the first edge of the adapter body, where the first distance is not equal to the second distance.

2. (Currently amended) The adapter of claim 1, wherein ~~the adapter electrical leads comprise first and second electrical power transmission leads~~ and the operating element has first and second contacts to which said first and second adapter electrical leads may be detachably connected in a first orientation with said first lead connected to said first contact and said second lead connected to said second contact, and said adapter is configured for rotation about an axis thereof ~~relative to said contacts~~ to a second orientation whereby said first lead is connected to said second contact and said second lead is connected to said first contact to reverse the polarity of electrical power transmitted to the operating element.

3. (Previously presented) The adapter of claim 2, wherein the operating element comprises a light source requiring electrical power to be supplied thereto in a selected polarity and said adapter is configured for detachment from said contacts and when detached may be rotated between at least two predetermined positions and reconnected to said contacts to permit

selection of the polarity of electrical power transmitted from said supply conduit to said light source.

4. (Original) The adapter of claim 3, wherein said two predetermined positions are disposed at 180 degrees relative to each other.

5. (Currently Amended) The adapter of claim 2, wherein ~~one end of at least one of the~~ leads the first end and second end of the adapter electrical leads each comprises a slide contact.

6. (Original) The adapter of claim 2, wherein said leads and contacts are connected by non-rotatable plug contacts.

7. (Previously presented) The adapter of claim 1, wherein the adapter body is configured to accommodate lines for the transmission of fluids or drive energy extending through the adapter body.

8. (Currently Amended) The adapter of claim 1 which comprises a pair of substantially fixed connectors electrically isolated from each other, said pair of connectors comprising a first connector which may be connected to a first power transmission line in said supply conduit and a second connector which may be connected to a second power transmission line in said supply conduit, the first and second adapter electrical leads ~~comprising a pair of substantially fixed leads electrically isolated from each other, said pair of leads~~ comprising a first lead which may be connected to a first contact of the operating element and a second lead which may be connected to a second contact of the operating element, and a switchable connection between said connectors and said leads which when in one switched condition provides an electrical current path from said first connector to said first lead and from said second connector to said second lead, and in a second switched condition provides an electrical current path from said first connector to said second lead and from said second connector to said first lead.

9. (Original) The adapter of claim 8, wherein said switchable connection comprises portions of said first and second leads which are movable between different circuit routings to

reverse the polarity of electrical power transmitted from said supply conduit to said operating element.

10. (Original) The adapter of claim 8, wherein said switchable connection comprises a switch.

11. (Original) The adapter of claim 1, wherein said leads each are divided into sections in which there are rigid sections and movable sections, and whereby different lead routing results through the connection of the movable sections to the rigid sections.

12. (Original) The adapter of claim 11, which further comprises a switch for making a selected connection between movable sections and rigid sections.

13. (Currently Amended) A light emitting apparatus including a light source requiring a selected polarity of power supply connected to a supply conduit through which electrical power is transmitted and an adapter connected between the light source and the supply conduit, said adapter having an adapter body, comprising first and second electrical leads, and being selectively switchable without disassembly by a manual operation to move the electrical leads of the adapter relative to the supply conduit to match the polarity of electrical power transmitted from the supply conduit to the selected polarity required by the light source, wherein the first electrical lead comprises a first end and the second electrical lead comprises a second end, said first and second ends being axially offset along a longitudinal axis of the adapter body such that the first end is located a first distance from a first edge of the adapter body and the second end is located a second distance from the first edge of the adapter body, where the first distance is not equal to the second distance.

14. (Currently Amended) The apparatus of claim 13 wherein ~~the electrical leads of the adapter comprise first and second electrical power transmission leads and~~ the light source is connected to first and second contacts to which said first and second leads may be detachably connected in a first orientation with said first lead connected to said first contact and said second lead connected to said second contact, and said adapter is configured for rotation about an axis

thereof ~~relative to said contacts~~ whereby said first lead is connected to said second contact and said second lead is connected to said first contact to reverse the polarity of electrical power transmitted to the operating element.

15. (Original) The apparatus of claim 14, wherein said adapter is configured for detachment from said contacts and when detached may be rotated between at least two predetermined positions and reconnected to said contacts to permit selection of the polarity of electrical power transmitted from said supply conduit to said light source.

16. (Original) The apparatus of claim 15, wherein said two predetermined positions are disposed at 180 degrees relative to each other.

17. (Previously presented) The apparatus of claim 13, further comprising a light conductor positioned to conduct light from said light source to a selected treatment site.

18. (Previously presented) The apparatus of claim 14, wherein one end of a lead of said adapter comprises a slide contact.

19. (Original) The apparatus of claim 14, wherein said leads and contacts are connected by non-rotatable plug contacts.

20. (Currently Amended) The apparatus of claim 13 wherein said adapter comprises a pair of substantially fixed connectors electrically isolated from each other, said pair of connectors comprising a first connector which may be connected to a first power transmission line in said supply conduit and a second connector which may be connected to a second power transmission line in said supply conduit, the first and second electrical leads of the adapter ~~comprising a pair of substantially fixed leads~~ being electrically isolated from each other, said ~~pair of leads comprising a first lead which may be~~ connected to a first contact of the light source and a said second lead ~~which may be~~ connected to a second contact of the light source, and a switchable connection between said connectors and said leads which when in one switched condition provides an electrical current path from said first connector to said first lead and from

said second connector to said second lead, and in a second switched condition provides an electrical current path from said first connector to said second lead and from said second connector to said first lead.

21. (Original) The apparatus of claim 20, wherein said switchable connection comprises portions of said first and second leads which are movable between different circuit routings to reverse the polarity of electrical power transmitted from said supply conduit to said operating element.

22. (Original) The apparatus of claim 20, wherein said switchable connection comprises a switch.

23. (Original) The apparatus of claim 13, wherein said leads each are divided into sections in which there are rigid sections and movable sections, and whereby different lead routing results through the selected connection of the movable sections to the rigid sections.

24. (Original) The apparatus of claim 23, which further comprises a switch for making a selected connection between movable sections and rigid sections.

25. (Currently Amended) A handpiece system comprising
a supply hose having a distal end coupling device with axially offset supply contacts for supplying electrical power transmission from an external power source,
a handle sleeve having a light source contained therein with receiving contacts for connecting the light source to receive electrical power from said coupling device, and
an adapter having an adapter body connectible between said coupling device and light source and having first and second electrical leads, wherein the adapter is selectively switchable without disassembly by a manual operation to move the electrical leads of the adapter relative to the supply contacts of the supply conduit to match the polarity of electrical power transmitted from the power source to that needed by the light source, and wherein the first adapter electrical lead comprises a first end and the second adapter electrical lead comprises a second end, said first and second ends being axially offset along a longitudinal axis of the adapter body such that

the first end is located a first distance from a first edge of the adapter body and the second end is located a second distance from the first edge of the adapter body, where the first distance is not equal to the second distance.

26. (Currently Amended) The handpiece system of claim 25, wherein the electrical leads of the adapter comprise first and second electrical power transmission leads and said receiving contacts comprise first and second contacts to which said leads may be detachably connected in a first orientation with said first lead connected to said first contact and said second lead connected to said second contact, and said adapter is configured for rotation about an axis thereof ~~relative to said contacts~~ to a second orientation whereby said first lead is connected to said second contact and said second lead is connected to said first contact to reverse the polarity of electrical power transmitted to the operating element.

27. (Original) The handpiece system of claim 25, wherein said adapter is configured for detachment from said receiving contacts and when detached may be rotated between at least two predetermined positions and reconnected to said receiving contacts to permit selection of the polarity of electrical power transmitted from said supply hose to said light source.

28. (Currently Amended) The handpiece system of claim 25, ~~wherein the electrical leads of the adapter comprise~~ further comprising a pair of substantially fixed connectors electrically isolated from each other, said pair of connectors comprising a first connector which may be connected to a first power transmission line in said supply hose and a second connector which may be connected to a second power transmission line in said supply hose, wherein the first and second ~~a pair of substantially fixed~~ leads are electrically isolated from each other, said ~~pair of~~ leads comprising a first lead ~~which may be being~~ being connected to a first receiving contact of the light source and a said second lead ~~which may be being~~ being connected to a second receiving contact of the light source, and a switchable connection between said connectors and said leads ~~which~~ such that when in one switched condition provides an electrical current path from said first connector to said first lead and from said second connector to said second lead, and in a second switched condition provides an electrical current path from said first connector to said second lead and from said second connector to said first lead.

29. (Original) The handpiece system of claim 28, wherein said switchable connection comprises portions of said first and second leads which are movable between different circuit routings to reverse the polarity of electrical power transmitted from said supply hose to said light source.

30. (Canceled)

31. (Previously presented) The adapter of claim 1, wherein the adapter is selectively switchable when connected by rotating at least a portion of the adapter body relative to the supply conduit and to the medical instrument.

32. (Previously presented) The apparatus of claim 13, wherein the adapter is selectively switchable by rotation.

33. (Previously presented) The handpiece system of claim 25, wherein the adapter is selectively switchable by rotation.

34. (Canceled)

35. (Currently Amended) An adapter for use in a handpiece system that includes a supply conduit and a medical instrument having an electrical operating element thereon, the adapter comprising:

an adapter body and first and second ~~transmission~~ adapter electrical leads with respective first and second axially offset slide contacts;

wherein, when the adapter is in place between the supply conduit and the medical instrument and the slide ~~terminals~~ contacts are connected, electrical power is received by the adapter from the supply conduit and transmitted through the adapter to the operating element, and

wherein the adapter is selectively switchable without disassembly by a manual operation to move the transmission leads relative to the supply conduit to match a polarity of the electrical power transmitted from the supply conduit to a polarity required by the operating element.

36. (Currently Amended) A light emitting apparatus comprising:

a light source requiring a selected polarity of power supply connected to a supply conduit through which electrical power is transmitted; and

an adapter connected between the light source and the supply conduit, the adapter comprising first and second adapter electrical ~~power transmission~~ leads and respective first and second axially offset slide contacts, said adapter being selectively switchable without disassembly by a manual operation to move the ~~transmission~~ adapter electrical leads relative to the supply conduit to match the polarity of electrical power transmitted from the supply conduit to that required by the light source, wherein the first adapter electrical lead comprises a first end and the second adapter electrical lead comprises a second end, said first and second ends being axially offset along a longitudinal axis of the adapter body such that the first end is located a first distance from the first edge of the adapter body and the second end is located a second distance from the first edge of the adapter body, where the first distance is not equal to the second distance.

37. (Currently Amended) A handpiece system comprising

a supply hose having a distal end coupling device with supply contacts comprising axially offset slip rings for supplying electrical power transmission from an external power source,

a handle sleeve having a light source contained therein with receiving contacts for connecting the light source to receive electrical power from said coupling device, and

an adapter connectible between said coupling device and light source, the adapter comprising first and second adapter electrical ~~power transmission~~ leads and respective first and second axially offset slide contacts connectible to the supply contacts, wherein the adapter is selectively switchable without disassembly by a manual operation to move the transmission leads relative to the supply hose to match the polarity of electrical power transmitted from the power source to that needed by the light source.

38. (Canceled)

39. (Previously presented) The apparatus of claim 13, wherein the apparatus comprises a sleeve defining a hollow interior space and an end cap sized to fit an end of a sleeve, and wherein the adapter is configured to be received in the sleeve with the end cap fitted to the sleeve to secure the adapter in place.

40. (New) The adapter of claim 35, wherein the adapter comprises a hollow space configured to accommodate a rotary coupling of the supply conduit, wherein each of the first and second adapter electrical leads comprises a first portion which is disposed circumferentially around the hollow space, so that the rotary coupling may be accommodated between these first portions of the leads, and wherein each of the first and second adapter electrical leads comprises a second portion which provide the first and second slide contacts, said second portions extending towards the hollow space.

41. (New) The light emitting apparatus of claim 36, wherein the adapter comprises a hollow space configured to accommodate a rotary coupling of the supply conduit, wherein each of the first and second adapter electrical leads comprises a first portion which is disposed circumferentially around the hollow space, so that the rotary coupling may be accommodated between these first portions of the leads, and wherein each of the first and second adapter electrical leads comprises a second portion which provide the first and second slide contacts, said second portions extending towards the hollow space.

42. (New) The handpiece system of claim 37, wherein the supply conduit comprises a rotary coupling which comprises the axially offset slip rings and wherein the adapter comprises a hollow space configured to accommodate a rotary coupling of the supply conduit, wherein each of the first and second adapter electrical leads comprises a first portion which is disposed circumferentially around the hollow space, so that the rotary coupling may be accommodated between these first portions of the leads, and wherein each of the first and second adapter electrical leads comprises a second portion which provide the first and second slide contacts, said second portions extending towards the hollow space.